



## Global Interoperability Program

### The National Climate Model Portal

*Glenn Rutledge*

*National Oceanic and Atmospheric Administration*

*May 5, 2010*

#### Abstract

The National Climate Model Portal (NCMP) will be developed as an extension of the technologies and capabilities currently operational in the NOAA Operational Model Archive and Distribution System (NOMADS). NCMP has been assigned the initial model access point for the new NOAA Climate Service (NCS) Climate service Portal (NCSP), and will serve as an on-line resource to both improve models for modelers, and to convey key aspects of complex scientific data in a manner accessible to both climate and weather modelers and to non-specialists or particular user communities. Improvements include climate model downscaling capability, inter-comparison capabilities with observational data, and a diagnostic prototype archive.

#### Deliverables

- A climate model downscaling capability.
- A functional requirements specification.
- A model-to-observational inter-comparison capability at NCDC.
- An ensemble diagnostics prototype archive.
- A “reanalysis clearinghouse” to hold a community vetted up-to-date set of observations for reanalysis projects.

**For more information:** [Glenn.Rutledge@noaa.gov](mailto:Glenn.Rutledge@noaa.gov)

## **Project Description**

In close collaboration with GIP partners and under the new NOAA Cooperative Institute for Climate Studies (CICS) at Asheville NC, FY10-11 NCMP activities will include:

- Development of model-to-obs capabilities, in support of the IPCC Assessment Reports (AR) and performed under the new NOAA Cooperative Institute for Climate Studies (CICS).
- Advance and perform model downscaling techniques, both statistical and dynamic.
- Engage the user community and coordinate stakeholder needs across the health, energy, transportation, water, population, domain of users.
- Conduct user requirements workshops.
- Work with existing NOAA efforts for a Climate Model Observation Simulation Experiment (OSSE).
- Serve as a resource to develop a capability for users to understand climate and weather models and their appropriate use by the proposed “Climate Model Helpdesk”.
- Advance the Unified Access Framework from the NOAA GEO-IDE.
- Advance an archive quality control capability for Ensemble and Multi Model diagnostics.

In addition, NCMP is prepared to further support GIP by providing infrastructure and campaigns that include:

### ***Infrastructure***

Data Services and Workflow:

- NOMADS archive continues: weather models and reanalysis products
- NCMP is the model access point for the new NOAA Climate Service (NCS) Portal

### ***Campaigns***

Climate Simulation:

- Adapting climate models and data services for exascale computing
- Downscaling efforts and product development at CICS
- Ensemble diagnostics archive

Local Application of Climate Information:

- NCS formation and delivery of climate information
- NCMP is the model access point for the new NOAA Climate Service (NCS) Portal
- NWS/NCS NOMADS Portals Operational

Weather and Forecasting:

- Increasing usability of federal weather and water models
- NCS/NWS/Ocean NOMADS Portals Operational